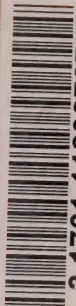


# nanticoke generating station

CA2  $\phi N$   
EP  
Z031



3 1761 11892707 8

Government  
Publications



# thermal-electric power

In Ontario, Canada's richest province, hydro is synonymous with electricity and during the last half-century Ontario Hydro has tapped most of the great rivers of this province for electric power. So much so that there remain only a few river sites which are considered capable of economic development.

However, forecasts indicate that by 1980 Hydro will have to increase its generating capacity to 26 million kilowatts, or double present resources.

With these long-range power requirements in mind, the Commission is pressing forward with construction of large-scale thermal-electric stations, both fossil-fueled and nuclear. Nanticoke generating station, about eight miles

east of Port Dover, on the north shore of Lake Erie, is the sixth coal-burning plant undertaken since 1949.

The Nanticoke station will have a total capacity of 4,000,000 kilowatts from eight units—or more than double Canada's share of the power resources at Niagara Falls.

Since 1949, Ontario Hydro has committed more than \$58 million to the quest for cleaner air at its thermal-electric stations. It is the Commission's policy to install the best and most efficient air quality control equipment on the market. When better techniques and technology are available, Hydro will use them.

# facts about nanticoke

## in-service dates:

Eight units to be installed for service from 1971 to 1977.

## estimated cost:

\$678 million

## coal consumption and storage:

At full load, the plant will burn close to 1,500 tons an hour. Coal will be delivered to the station's dock on Lake Erie. From there it will be transported to the storage area via twin conveyors, each with a capacity of 3,000 tons an hour. Coal will be either stacked for storage, or reclaimed to the station through two automatic stacker-reclaimers, each with dual ratings of 1,000 or 2,000 tons

per hour. Up to 5 million tons of coal can be stock-piled in the storage area.

#### **water requirements:**

At full load, the plant will require about 1,200,000 gallons of water per minute for condenser cooling purposes. An additional 800,000 gallons of water will be drawn from Lake Erie to mix with the condenser discharge. The total volume of water will then be returned to the lake slightly warmer but no less clean.

#### **work force:**

At peak construction in 1970, the work force reached 2,300 men.

#### **steam generators:**

Eight boilers will be used, each capable of producing 3,600,000 pounds of steam an hour, at 2,350 pounds per square inch at the turbine, with superheat and reheat temperatures of 1,000 degrees Fahrenheit.

#### **turbine generators:**

Eight 500,000-kilowatt units.

#### **air-quality controls:**

Electrostatic precipitators will be designed to remove 99.5 per cent of the fly ash particles from flue gases before they enter the chimney. A feature of the Nanticoke plant, unique to North America, will be its two, 655-foot, four-flue chimneys, each serving four units.

The stacks will disperse gases high into the atmosphere.

#### **principal structures:**

The powerhouse will be a steel-framed aluminum-clad structure 1760 feet long and 275 feet wide. Raised sections reaching a full 20 storeys high will house the boilers. The turbine-generators will be located on a lower level and run across the full length at the front of the building. A four-storey administration block, 165 by 40 feet on the top two floors, and 90 by 40 feet on the bottom two, will be connected to the powerhouse by an ancillary services wing.

